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25297 7590 01/28/2008 JENKINS, WILSON, TAYLOR & HUNT, P. A. 3100 TOWER BLVD., Suite 1200 DURHAM, NC 27707			EXAMINER NGUYEN, BINH AN DUC	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/689,796

Applicant(s)

GOLDBERG ET AL.

Examiner

Binh-An D. Nguyen

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-56 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-56 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

The Request for Continued Examination and the Amendment filed November 7, 2007, respectively, have been received. According to the Amendment, claims 1, 18, 28, 38, and 49 have been amended. Currently, claims 1-56 are pending in the application. Acknowledgment has been made.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 38, and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuoka et al. (U.S. Patent Number 5,154,614) in view of Nagase (7,051,292).

Referring to claim 1, Matsuoka et al. discloses an apparatus comprising: (a) a frame (Fig. 1: Main body 1); (b) a plurality of tactile switching devices mounted at the frame, each tactile switching device configured to be depressible by the user between a raised position which emulates a raised Braille dot and a lowered position which emulates the absence of a Braille dot (denote input keys 2a-2e for a Braille input); and (c) electronic circuitry supported by the frame (Fig. 3) and comprising an audio output device (speaker 7), the circuitry communicating with the switching devices for producing an auditory output for emission by the audio output device in response to a combination of switching devices selectively activated by a user, wherein the auditory output

corresponds to the Braille character represented by the combination of activated switching devices (Fig. 3). Note that, the previously amended limitations of each tactile switching device configured to be depressible by the user between a raised position which emulates a raised Braille dot and a lowered position which emulates the absence of a Braille dot is anticipated by Matsuoka et al., e.g., both the Matsuoka et al.'s and Applicant's Braille writers enable users to depress each tactile switching device to emulate patterns of raised Braille dots and output information audibly (Matsuoka et al.'s 2:30-67). Matsuoka et al. does not explicitly teach the amended limitation of alternative position wherein each tactile switching device configured to stay in the raised position or the lowered position until depressed by the user again. **Nagase**, however, teaches an information input/output device for visually impaired users comprising tactile switching device configured to stay in the raised position or the lowered position until depressed by the user again (3:19-4:34; 6:6-61; 7:19-8:34). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide the latching tactile switching device of Nagase to the sound output electronic apparatus of Matsuoka et al. to come up with a communication system for the impaired users that enhance user friendly interactivity without confusion. See also motivation for combination from Nagase (7:19-46).

Referring to claim 38, Matsuoka et al. discloses a method comprises (a) providing a plurality of tactile switching devices, each switching device configured to be actuatable between a raised position that can be sensed by a person as a raised Braille dot and a lowered position that can be sensed as the absence of a raised Braille dot

(denote input keys 2a-2e for a Braille input); and (b) in response to a combination of switching devices actuated into respective raised positions, providing an auditory output for the person corresponding to the Braille character represented by the combination of switching devices actuated (Fig.3). **Note that**, the limitations of each switching device configured to be actuatable between a raised position that can be sensed by a person as a raised Braille dot and a lowered position that can be sensed as the absence of a raised Braille dot is anticipated by Matsuoka et al., e.g., the Matsuoka et al.'s Braille writer enables users to depress each tactile switching device to emulate patterns of raised or lowered Braille dots and output information audibly (Matsuoka et al.'s 2:30-67).

Referring to claim 42, Matsuoka et al. discloses a method in response to actuation of the combination of switching devices, causing the tactile switching devices to transmit a user input signal to an electronic control device and, based on the user input signal received (Fig. 3), causing the be played back to the person electronic control device to select the auditory output to indicative of the Braille character corresponding to the combination of switching devices actuated (column 3 lines 21-24 of Matsuoka et al.).

Claims 2-4, 18, 28, 39-41, 49 & 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuoka et al. in view of Nagase (7,051,292), and further in view of Applicant's Admitted Prior Art (AAPA).

Referring to claim 2, Matsuoka et al. and Nagase disclose the apparatus according to claim 1. Matsuoka et al. and Nagase do not disclose comprising a pair of

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arms coupled to the frame, each arm supporting three of the tactile switching devices, wherein at least a portion of each switching device is raised above an upper surface of a corresponding arm when at the raised position. However, AAPA teaches comprising a pair of arms (two wooden arms) coupled to the frame (typical swing cell instrument), each arm supporting three of the tactile switching devices (three holes), wherein at least a portion of each switching device is raised above an upper surface of a corresponding arm when at the raised position (pegs in the holes stick out). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a pair of arms, as disclosed in the AAPA, incorporated into Matsuoka et al.'s and Nagase's interactive system in order to emulate a 1 x 6 keyboard of a Braille writer.

Referring to claim 3, Matsuoka et al.'s and Nagase's interactive system, as modified by AAPA, teaches wherein the pair of arms are pivotably coupled to the frame and rotatable along the frame between a first position at which the arms are generally parallel to each other and the switching devices are arranged in a 3 X 2 array of Braille dots for emulating a Braille cell, and a second position at which the arms are pivoted outwardly from each other and the switching devices are arranged in a 1 X 6 row of Braille dots for emulating a Braille writer (page 2 lines 16-21 of AAPA).

Referring to claim 4, Matsuoka et al.'s and Nagase's interactive system, as modified by AAPA, teaches wherein each arm comprises a pivot member extending into a corresponding bore in the frame, and each arm is pivotable about an axis of its respective pivot member (page 2 line 20: rotated or pivoted away of AAPA).

Referring to claim 18, Matsuoka et al. discloses (a) a frame (Fig. 1: Main body 1); (b) a plurality of switching devices for selective activation by a user to represent one or more raised Braille dots (denote input keys 2a-2e for Braille input); and (d) electronic circuitry supported by the frame (Fig. 3) and comprising an audio output device (speaker 7), the circuitry communicating with the switching devices for producing an auditory output for emission by the audio output device in response to a combination of switching devices selectively activated by a user, wherein the auditory output corresponds to the Braille character represented by the combination of activated switching devices (Fig. 3).

Matsuoka et al. does not disclose each latching switching device configured to be depressible by the user between a raised position raised above the arm on which the respective switching device resides to emulate a raised Braille dot and a lowered position about flush with the arm on which the respective switching device resides to emulate the absence of a Braille dot. Nagase, however, teaches each latching switching device configured to be depressible by the user between a raised position raised above the arm on which the respective switching device resides to emulate a raised Braille dot and a lowered position about flush with the arm on which the respective switching device resides to emulate the absence of a Braille dot (3:19-4:34; 6:6-61; 7:19-8:34). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide the latching tactile switching device of Nagase to the sound output electronic apparatus of Matsuoka et al. to come up with a communication system for the

impaired users that enhance user friendly interactivity without confusion. See also motivation for combination from Nagase (7:19-46).

Matsuoka et al. and Nagase do not disclose (c) a pair of arms pivotably coupled to the frame, each arm supporting at least three switching devices, wherein the pair of arms are rotatable along the frame between a first position at which the arms are generally in parallel relation and the switching devices are arranged in a 3 X 2 array of Braille dots for emulating a Braille cell, and a second position at which the arms are pivoted outwardly from each other in a 1 X 6 row of Braille dots for emulating a Braille writer. However, AAPA teaches (c) a pair of arms (two wooden arms) pivotably coupled to the frame (typical swing cell instrument), each arm supporting at least three switching devices (three holes), wherein the pair of arms are rotatable along the frame between a first position at which the arms are generally in parallel relation and the switching devices are arranged in a 3 X 2 array of Braille dots for emulating a Braille cell, and a second position at which the arms are pivoted outwardly from each other in a 1 X 6 row of Braille dots for emulating a Braille writer (page 2 lines 16-21). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a pair of arms, as disclosed in the AAPA, incorporated into Matsuoka et al.'s and Nagase's interactive system in order to emulate a 1 x 6 keyboard of a Braille writer.

Referring to claim 28, Matsuoka et al. discloses (a) a frame (Fig. 1: Main Body 1); (b) a plurality of tactile switching devices, each tactile switching device depressible between a lowered position and a raised position (denote input keys 2a-2e for Braille input); and (d) and electronic circuitry supported by the comprising an audio output

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device (speaker 7), the with the switching devices for producing audio output device in response to a selectively activated by a user, wherein frame (Fig. 3) circuitry an auditory output and communicating for emission by the combination of switching devices the auditory output corresponds to the Braille character represented by the combination of activated switching devices (Fig. 3).). Matsuoka et al. does not explicitly teach the amended limitation of alternative position wherein each tactile switching device configured to stay in the raised position or the lowered position until depressed by the user again. **Nagase**, however, teaches an information input/output device for visually impaired users comprising tactile switching device configured to stay in the raised position or the lowered position until depressed by the user again (3:19-4:34; 6:6-61; 7:19-8:34). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide the latching tactile switching device of Nagase to the sound output electronic apparatus of Matsuoka et al. to come up with a communication system for the impaired users that enhance user friendly interactivity without confusion. See also motivation for combination from Nagase (7:19-46). Matsuoka et al. and Nagase do not disclose (c) a pair of arms pivotably coupled to the frame, each arm supporting at least three tactile switching devices wherein, for the raised position of each switching device, at least a portion of the switching device is raised above an upper surface of its corresponding arm for emulating a raised Braille dot, and the pair of arms are rotatable along the frame between a first position at which the arms are generally in parallel relation and the switching, devices are arranged in a 3 X 2 array of Braille dots for emulating a Braille cell, and a second position at which the arms are

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pivoted outwardly from each other in a 1 X 6 row of Braille dots for emulating a Braille writer. However, AAPA teaches (c) a pair of arms (two wooden arms) pivotably coupled to the frame (typical swing cell instrument), each arm supporting at least three tactile switching devices (three holes) wherein, for the raised position of each switching device, at least a portion of the switching device is raised above an upper surface of its corresponding arm for emulating a raised Braille dot (pegs in the holes stick out), and the pair of arms are rotatable along the frame between a first position at which the arms are generally in parallel relation and the switching devices are arranged in a 3 X 2 array of Braille dots for emulating a Braille cell, and a second position at which the arms are pivoted outwardly from each other in a 1 X 6 row of Braille dots for emulating a Braille writer (page 2 lines 16-21). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a pair of arms, as disclosed in the AAPA, incorporated into Matsuoka et al.'s and Nagase's interactive system in order to emulate a 1 x 6 keyboard of a Braille writer.

Referring to claim 39, Nagase discloses arranging the tactile switching devices into a combination of switching 3 X 2 Braille cell (3:30-35), wherein actuating the devices into respective raised positions enables the person to learn to read Braille characters. Further, AAPA teaches comprising arranging the tactile switching devices into a combination of switching 3 X 2 Braille cell, wherein actuating the devices into respective raised positions permits facilitation of learning to read Braille characters by the person (page 2 lines 18-20). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include comprising arranging the tactile

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switching devices into a combination of switching 3 X 2 Braille cell, as disclosed by Nagase or by AAPA, incorporated into Matsuoka et al. in order to have each 3 x 2 Braille cell correspond to a character.

Referring to claim 40, Matsuoka et al.'s and Nagase's interactive system, as modified by AAPA, teaches arranging the tactile switching devices into a 1 X 6 row emulating a keyboard for a Braille writer, wherein actuating the combination of switching devices into respective raised positions enables the person to learn to write Braille characters (page 2 lines 16-21 of AAPA).

Referring to claim 41, Matsuoka et al.'s and Nagase's interactive system, as modified by AAPA, teaches comprising providing a pair of arms (two wood arms of AAPA), each arm supporting at least three of the tactile switching devices (three holes of AAPA), and rotating the arms between a first position, at which the arms are generally in parallel relation and the switching devices are arranged in a 3 X 2 array of Braille dots for emulating a Braille cell, and a second position at which the arms are pivoted outwardly from each other in a 1 X 6 row of Braille dots for emulating a Braille writer (page 2 lines 16-21 of AAPA).

Referring to claim 49, Matsuoka et al. teaches (d) in response to a combination of switching devices actuated, providing an auditory output for the person corresponding to the Braille character represented by the combination of switching devices actuated (Fig. 3). Matsuoka et al. does not disclose latching tactile switching devices with each switching device being depressible between a raised position raised above the arm on which the respective switching device resides and a lowered position about flush with

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the arm on which the respective switching device resides, wherein the switching devices can be selectively depressed between the raised positions and the lowered positions for emulating patterns of raised Braille dots and the switching devices in the raised positions can be sensed by touch as Braille dots; and depressing the tactile switching devices so that the tactile switching devices represent a Braille character with the tactile switching devices that correspond to the Braille dots of the Braille character being in the raised positions and the other tactile switching devices being in the lowered positions.

Nagase, however, teaches latching tactile switching devices with each switching device being depressible between a raised position raised above the arm on which the respective switching device resides and a lowered position about flush with the arm on which the respective switching device resides, wherein the switching devices can be selectively depressed between the raised positions and the lowered positions for emulating patterns of raised Braille dots and the switching devices in the raised positions can be sensed by touch as Braille dots; and depressing the tactile switching devices so that the tactile switching devices represent a Braille character with the tactile switching devices that correspond to the Braille dots of the Braille character being in the raised positions and the other tactile switching devices being in the lowered positions (3:19-4:34; 6:6-61; 7:19-8:34). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide the latching tactile switching device of Nagase to the sound output electronic apparatus of Matsuoka et al. to come up with a communication system for the impaired users that enhance user friendly

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interactivity without confusion. See also motivation for combination from Nagase (7:19-46).

Matsuoka et al. and Negase do not disclose (a) providing a pair of arms, each arm supporting at least three tactile switching devices, wherein the switching devices can be sensed by touch and selectively actuated for emulating patterns of raised Braille dots and (b) rotating the pair of arms between a first position at which the arms are generally in parallel relation and the switching devices are arranged in a 3 X 2 array of Braille dots for emulating a Braille cell, and a second position at which the arms are pivoted outwardly from each other in a 1 X 6 row of Braille dots for emulating a Braille writer. However, AAPA teaches (a) providing a pair of arms (two wooden arms), each arm supporting at least three tactile switching devices (three holes), wherein the switching devices can be sensed by touch and selectively actuated for emulating patterns of raised Braille dots; (b) rotating the pair of arms between a first position at which the arms are generally in parallel relation and the switching devices are arranged in a 3 X 2 array of Braille dots for emulating a Braille cell, and a second position at which the arms are pivoted outwardly from each other in a 1 X 6 row of Braille dots for emulating a Braille writer (page 2 lines 16-21). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a pair of arms, as disclosed in the AAPA, incorporated into Matsuoka et al.'s and Nagase's interactive system in order to emulate a 1 x 6 keyboard of a Braille writer.

Referring to claim 50, Matsuoka et al.'s and Nagase's interactive system, as modified by AAPA, discloses in response to actuation of the combination of switching

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devices, causing the tactile switching devices to transmit a user input signal to an electronic control device and, based on the user input signal received (Fig. 3), causing the electronic control device to select the auditory output to be played back to the person indicative of the Braille character corresponding to the combination of switching devices actuated (column 3 lines 21-24 of Matsuoka et al.).

Claims 5-8, 10-15, 17, 19, 20, 22-25, 27, 29-31, 33, 34, 36, 37, 43-46 & 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuoka et al. in view of Nagase (7,051,292), and further in view of Johnson et al. (U.S. Patent Number 3,883,146).

Referring to claims 5, 19 & 29, Matsuoka et al. and Nagase disclose the apparatus according to claims 1, 18, and 28 and wherein the circuitry comprises: (a) a control device for receiving a user input produced by the combination of switching devices selectively activated by the user, and for sending a control signal based on the user input received. Matsuoka et al. and Nagase do not disclose (b) a playback device for storing a plurality of different auditory outputs, receiving a control signal sent from the control device, and sending a selected auditory output to the audio output device based on the control signal received from the control device. However, Johnson et al. teaches (b) a playback device for storing a plurality of different auditory outputs, receiving a control signal sent from the control device, and sending a selected auditory output to the audio output device based on the control signal received from the control device (column 9 lines 25-36). It would have been obvious to one of ordinary skill in the art at

the time the invention was made to include a playback device, as disclosed by Johnson et al., incorporated into Matsuoka et al.'s and Nagase's interactive system in order to teach proper pronunciation of words.

Referring to claim 6, Matsuoka et al.'s and Nagase's interactive system, as modified by Johnson et al., discloses wherein the control device comprises a microcontroller (column 3 lines 21-24 of Matsuoka et al.).

Referring to claims 7, 20, and 30, Matsuoka et al.'s and Nagase's interactive system, as modified by Johnson et al., teaches comprising an audio output selector switch communicating with the control device for selecting a type of auditory output to be sent from the playback device from a plurality of different types of auditory outputs stored in the playback device (column 9 lines 25-36: the examiner views this limitation as determining which pre-recorded word to present of Johnson et al.).

Referring to claims 8 and 31, Matsuoka et al.'s and Nagase's interactive system, as modified by Johnson et al., teaches wherein, for each user input, the plurality of different types of auditory outputs are selected from the group consisting of a pronunciation of a character corresponding to the user input, a pronunciation of a word beginning with a character corresponding to the user input, a sound associated with a word beginning with a character corresponding to the user input, and combinations thereof (column 1 lines 21-26 & column 9 lines 25-36 of Johnson et al.).

Referring to claims 10, 22, and 33, Matsuoka et al.'s and Nagase's interactive system, as modified by Johnson et al., teaches comprising a record/playback switch communicating with the control device for selectively switching the electronic circuitry

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between a playback mode enabling the electronic circuitry to produce the auditory output in response to activation of the switching devices by the user, and a record mode enabling auditory outputs to be received by the playback device and stored thereby (column 9 lines 25-36 & column 8 lines 47-49 of Johnson et al.).

Referring to claims 11, 23, and 37, Matsuoka et al.'s and Nagase's interactive system, as modified by Johnson et al., teaches comprising an audio input connection communicating with the playback device for communicating with an audio input device (microphone 95 of Johnson et al.).

Referring to claim 12, Matsuoka et al.'s and Nagase's interactive system, as modified by Johnson et al., teaches wherein the audio input connection comprises an audio jack mounted to the frame (Fig. 14: the examiner views this limitation as there must be an audio jack mounted to the frame in order for the microphone to be attached to the system of Johnson et al.).

Referring to claims 13 and 24, Matsuoka et al.'s and Nagase's interactive system, as modified by Johnson et al., teaches comprising a record button communicating with the control device for selectively enabling the playback device to record an auditory input received from audio input connection (Fig. 14: recorder 97 of Johnson et al.).

Referring to claim 14, Matsuoka et al.'s and Nagase's interactive system, as modified by Johnson et al., teaches wherein the playback device comprises a voice chip (the examiner views this limitation as there is a voice chip within the recorder in order to store the sound from the microphone of Johnson et al.).

Referring to claims 15, 25, and 34, Matsuoka et al.'s and Nagase's interactive system, as modified by Johnson et al., teaches comprising an audio output selector switch communicating with the circuitry for selecting a type of auditory output to be produced by the circuitry from a plurality of different types of auditory outputs stored by the circuitry (column 9 lines 25-36; the examiner views this limitation as determining which pre-recorded word to present of Johnson et al.).

Referring to claims 17, 27, and 36, Matsuoka et al.'s and Nagase's interactive system, as modified by Johnson et al., teaches comprising a record/playback switch communicating with the circuitry for selectively switching the circuitry between a playback mode enabling the circuitry to produce the auditory output in response to activation of the switching devices by the user, and a record mode enabling the circuitry to receive and store audio outputs (column 9 lines 25-36 & column 8 lines 47-49 of Johnson et al.).

Referring to claim 43, Matsuoka et al. and Nagase disclose the method of claim 42. Matsuoka et al. and Nagase do not disclose wherein causing the electronic control device to select the auditory output to be played back comprises accessing a memory in which a plurality of different auditory outputs are stored. However, Johnson et al. teaches wherein causing the electronic control device to select the auditory output to be played back comprises accessing a memory in which a plurality of different auditory outputs are stored (column 9 lines 25-36). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include causing the electronic control device to select the auditory output to be played back, as disclosed by Johnson

et al., incorporated into Matsuoka et al.'s and Nagase's interactive system in order to teach proper pronunciation of words.

Referring to claim 44, Matsuoka et al.'s and Nagase's interactive system, as modified by Johnson et al., discloses wherein the memory is disposed in a playback device and, after the selected auditory output has been accessed, the method comprises causing the playback device to send the selected auditory output to an audio output device for emission thereby (Fig. 3 of Matsuoka et al.).

Referring to claim 45, Matsuoka et al. and Nagase disclose the method according to claim 38. Matsuoka et al. and Nagase do not disclose comprising selecting a type of audio output to be provided from a plurality of different types of audio outputs stored in circuitry communicating with the tactile switching devices. However, Johnson et al. teaches comprising selecting a type of audio output to be provided from a plurality of different types of audio outputs stored in circuitry communicating with the tactile switching devices (column 9 lines 25-36: the examiner views this limitation as determining which pre-recorded word to present of Johnson et al.). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include selecting a type of audio output, as disclosed by Johnson et al., incorporated into Matsuoka et al.'s and Nagase's interactive system in order to determine which pre-recorded word to present.

Referring to claim 46, Matsuoka et al.'s and Nagase's interactive system, as modified by Johnson et al., teaches wherein, for the combination of actuated switching devices, the plurality of different types of audio outputs are selected from the group

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consisting of a pronunciation of the character corresponding to the combination of actuated switching devices, a pronunciation of a word beginning with a character corresponding to the combination of actuated switching devices, a sound associated with a word beginning with a character corresponding to the combination of actuated switching devices, and combinations thereof (column 1 lines 21-26 & column 9 lines 25-36 of Johnson et al.).

Referring to claim 48, Matsuoka et al. and Nagase discloses the method according to claim 38. Matsuoka et al. and Nagase do not disclose comprising recording a plurality of auditory outputs into electronic circuitry communicating each auditory output corresponds to with the switching devices, wherein the Braille character represented by a specific actuatable combination of switching devices. However, Johnson et al. teaches comprising recording a plurality of auditory outputs into electronic circuitry communicating with the switching devices, wherein each auditory output corresponds to the Braille character represented by a specific actuatable combination of switching devices (recorder 97). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include recording, as disclosed by Johnson et al., incorporated into Matsuoka et al.'s and Nagase's interactive system in order to playback how the user pronounced the word.

Claims 9, 16, 21, 26, 32 & 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuoka et al., Nagase and Johnson et al. and further in view of Haugen (U.S. Patent Number 6,022,220).

Referring to claims 9, 21 & 32, Matsuoka et al., Nagase, and Johnson et al. disclose the apparatus according to claims 5, 19 & 29. Matsuoka et al., Nagase, and Johnson et al. do not disclose comprising a time delay switch communicating with the control device for selecting a value for a time delay between receiving the user input by the control device and sending the selected auditory output by the playback device. However, Haugen teaches a time delay switch communicating with the control device for selecting a value for a time delay between receiving the user input by the control device and sending the selected auditory output by the playback device (column 4 lines 39-44). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a time delay, as disclosed by Haugen, incorporated into the interactive system of Matsuoka et al., Nagase, and Johnson et al. in order to help the user to read the desired material in Braille.

Referring to claims 16, 26 & 35, Matsuoka et al., Nagase, and Johnson et al. disclose the apparatus according to claims 1, 18 & 28. Matsuoka et al., Nagase, and Johnson et al. do not disclose comprising a time delay switch communicating with the circuitry for selecting a value for a time delay between receiving a user input by the circuitry resulting from activation of the switching devices, and emitting the audio output by the audio output device. However, Haugen teaches comprising a time delay switch communicating with the circuitry for selecting a value for a time delay between receiving a user input by the circuitry resulting from activation of the switching devices, and emitting the audio output by the audio output device (column 4 lines 39-44). It would have been obvious to one of ordinary skill in the art at the time the invention was made

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to include a time delay, as disclosed by Haugen, incorporated into the interactive system of Matsuoka et al., Nagase, and Johnson et al. in order to help the user to read the desired material in Braille.

Claim 47 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuoka et al. and Nagase in view of Haugen.

Referring to claim 47, Matsuoka et al. and Nagase disclose the method according to claim 38. Matsuoka et al. and Nagase do not disclose comprising selecting a length of a delay to transpire between the actuation of the combination of switching devices and the providing of the auditory output corresponding to the combination. However, Haugen teaches comprising selecting a length of a delay to transpire between the actuation of the combination of switching devices and the providing of the auditory output corresponding to the combination (column 4 lines 39-44). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include selecting a length of a delay, as disclosed by Haugen, incorporated into Matsuoka et al.'s and Nagase interactive system in order to help the user to read the desired material in Braille.

Claims 51-54 & 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuoka et al., Nagase, and AAPA and further in view of Johnson et al..

Referring to claim 51, Matsuoka et al., Nagase, and AAPA disclose the method of claim 42. Matsuoka et al., Nagase, and AAPA do not disclose wherein causing the electronic control device to select the auditory output to be played back comprises accessing a memory in which a plurality of different auditory outputs are stored. However, Johnson et al. teaches wherein causing the electronic control device to select the auditory output to be played back comprises accessing a memory in which a plurality of different auditory outputs are stored (column 9 lines 25-36). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include causing the electronic control device to select the auditory output to be played back, as disclosed by Johnson et al., incorporated into the interactive system of Matsuoka et al., Nagase, and AAPA in order to teach proper pronunciation of words.

Referring to claim 52, Matsuoka et al., Nagase, and AAPA, as modified by Johnson et al., disclose wherein the memory is disposed in a playback device and, after the selected auditory output has been accessed, the method comprises causing the playback device to send the selected auditory output to an audio output device for emission thereby (Fig. 3 of Matsuoka et al.).

Referring to claim 53, Matsuoka et al., Nagase, and AAPA disclose the method according to claim 38. Matsuoka et al., Nagase, and AAPA do not disclose comprising selecting a type of audio output to be provided from a plurality of different types of audio outputs stored in circuitry communicating with the tactile switching devices. However, Johnson et al. teaches comprising selecting a type of audio output to be provided from a plurality of different types of audio outputs stored in circuitry communicating with the

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tactile switching devices (column 9 lines 25-36: the examiner views this limitation as determining which pre-recorded word to present of Johnson et al.). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include selecting a type of audio output, as disclosed by Johnson et al., incorporated into the interactive system of Matsuoka et al., Nagase, and AAPA in order to determine which pre-recorded word to present.

Referring to claim 54, Matsuoka et al., Nagase, and AAPA, as modified by Johnson et al., teaches wherein, for the combination of actuated switching devices, the plurality of different types of audio outputs are selected from the group consisting of a pronunciation of the character combination of corresponding to the combination of actuated switching devices, a pronunciation of a word beginning with a character corresponding to the combination of actuated switching devices, a sound associated with a word beginning with a switching devices, and combinations thereof (column 1 lines 21-26 & column 9 lines 25-36 of Johnson et al.).

Referring to claim 56, Matsuoka et al., Nagase, and AAPA disclose the method according to claim 38. Matsuoka et al./AAPA does not disclose comprising recording a plurality of auditory outputs into electronic circuitry communicating with the switching devices wherein each auditory output corresponds to the Braille character represented by a specific switching devices. However, Johnson et al. teaches comprising recording a plurality of audio outputs into electronic circuitry communicating with the switching devices, wherein each auditory output corresponds to the Braille character represented by a specific actuable combination of switching devices (recorder 97). It would have

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been obvious to one of ordinary skill in the art at the time the invention was made to include recording, as disclosed by Johnson et al., incorporated into the interactive system of Matsuoka et al., Nagase, and AAPA in order to playback how the user pronounced the word.

Claim 55 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuoka et al., Nagase, and AAPA and further in view of Haugen.

Referring to claim 55, Matsuoka et al., Nagase, and AAPA disclose the method according to claim 38. Matsuoka et al., Nagase, and AAPA do not disclose comprising selecting a length of a delay to outputs into electronic circuitry communicating wherein each auditory output corresponds to transpire between the actuation of the combination of switching devices and the providing of the auditory output corresponding to the combination. However, Haugen teaches comprising selecting a length of a delay to transpire between the actuation of the combination of switching devices and the providing of the auditory output corresponding to the combination (column 4 lines 39-44). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include selecting a length of a delay, as disclosed by Haugen, incorporated into the interactive system of Matsuoka et al., Nagase, and AAPA in order to help the user to read the desired material in Braille.

Response to Arguments

Applicant's arguments with respect to claims 1-56 have been considered but are moot in view of the new ground(s) of rejection.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Binh-An D. Nguyen whose telephone number is 571-272-4440. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pezzuto can be reached on 571-272-6996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BN



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Art Unit 3714